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ABSTRACT

With focus on the similarities rather than the differences among Latin American countries, the interrelationships of education and employment are analyzed to draw implications for educational policy and planning. Emphasis is on the need to take into account the socio-political and cultural constraints operating in the Latin American context as different from the developed world. Description of the present situation covers relationships between educational level and occupational level, income, and unemployment. Tables present data from different countries and cities, in some cases by age and sex. As guidelines for improvement strategies, several historical trends are discussed: expansion of labor markets and educational levels, employment and educational imbalances, productivity, technological change, labor mobility, and community development. Options for future development, in terms of adjustment to actual educational policies, are examined under three headings: matching education, training, and the needs of the informal sector: matching formal education and employment in the formal sector: and education and training for the rural areas. References to research studies are documented throughout the paper and a brief abstract in French is included. (JT)

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Report Studies S.67

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EDUCATION AND EMPLOYMENT IN LATIN AMERICA

by

Ernesto Schiefelbein

June 1979

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RESUME

Ce papier présente une analyse de la relation entre l'éducation et l'emploi en Amerique latine. Dans la première partie, l'auteur examine la relation existante entre éducation - occupation - revenu, de même qu'entre le chômage et les aspirations d'ordre éducationnel et occupationnel, compte tenu de variantes telles que le sexe, l'âge, l'importance de l'entreprise, le secteur d'activité économique et la durée du chômage.

Dans la seconde partie, l'auteur examine les courants historiques afin de fournir une perspective d'analyse. Des sujets tels que l'expansion du marché du travail, un échantillon représentatif des déséquilibres en matière d'éducation, le progrès technologique, les fluctuations du marché de l'emploi, et le développement communautaire sont abordés dans la discussion.

Pour conclure, plusieurs problèmes relatifs au développement futur sont étudiés et des alternatives sont proposées en vue de mettre au point des adaptations des politiques actuelles de l'éducation. L'auteur fait observer, par exemple, que les recherches en cours permettent de supposer qu'un accroissement des motivations telles que l'avancement personnel, notamment, pourraient conduire à rehausser les niveaux du développement économique. Des expériences qui permettraient de stimuler de telles motivations personnelles et auraient, de ce fait, valeur d'exemple, devraient être examinées en détail.

AVANT PROPOS

La Conférence Général de l'Unesco, lors de sa 19e session (Nairobi, Kenya, 1976) a décidé que "la collecte et la dissémination de l'information sur les nouvelles politiques d'éducation pour le renouvellement et la réforme des systèmes d'éducation adaptés aux besoins spécifiques basés sur des situations sociales, économiques et culturelles particulières et qui ont comme objectif la démocratisation des systèmes dans le cadre de l'éducation permanente" (Résolution 1.111 du programme) se situent parmi les objectifs prioritaires de l'Organisation.

Conformément à ce mandat, la Division des politiques et de la planification de l'éducation a entrepris en 1977 la reproduction et la distribution de certains documents techniques, sous le titre général de "Rapports et Etudes ...". Cette série a pour objet de stimuler la réflexion et les discussions portant sur les problèmes courants auxquels doivent faire face les décideurs, les planificateurs et les administrateurs de l'éducation ainsi que les architectes scolaires. La distribution se limite aux professionnels du Siège et hors-Siège, ainsi qu'aux personnels d'institutions gouvernementales ou privées susceptibles de les trouver utiles pour leur travail. Nous espérons que cette série constituera un moyen pour promouvoir et augmenter la communication entre les individus et les institutions concernés par les différents aspects des politiques et de la planification de l'éducation.

Ces "Rapports et Etudes ..." se divisent en deux catégories: (i) les documents qui traitent d'un sujet (numérotés S.1, S.2, etc.) et (ii) les documents qui traitent d'un pays (numérotés C.1, C.2, etc. Les premiers portent sur des sujets tels que les politiques et la législation de l'éducation, les techniques de gestion et de planification, la planification et l'étude des espaces, constructions et équipements éducatifs, la relation entre éducation/travail/emploi, la coopération entre les pays, le rôle de l'éducation par rapport au Nouvel ordre économique international, etc. Les seconds présentent des profils du système éducatif d'un pays donné (principalement les pays les moins développés), ou traitent d'une réforme ou d'un aspect spécifique du système éducatif du pays concerné.

Certains des documents reproduits dans cette série sont des "desk studies" basés sur des informations déjà existantes à l'Unesco, d'autres ont été préparés à l'origine pour servir de documents de base ou de discussion à des réunions ou séminaires, alors que d'autres encore, exprimant les positions personnelles des auteurs, se situent dans le cadre d'un dialogue permanent au sein du Secrétariat de l'Unesco.

Les documents sont choisis pour cette série en fonction de l'actualité du sujet traité. Les lecteurs doivent tenir compte du fait que beaucoup, sinon la plupart, des documents sont des documents de travail inédits et ne sont pas destinés au public. Certains auteurs ont rédigé ces documents dans une langue qui n'est pas la leur, ce qui explique certaines faiblesses linguistiques. Nous voudrions également souligner que les documents expriment les idées de leurs auteurs respectifs et ne reflètent pas nécessairement la politique de l'Unesco.

La Division des politiques et de la planification de l'éducation souhaite recevoir des commentaires ou suggestions au sujet de la série, et demande aux lecteurs de bien vouloir faire part de leurs réactions à certaines idées exprimées ou à des documents dans leur ensemble. Dans certains cas, il sera peut-être possible de reproduire ces commentaires et réactions lors d'une prochaine parution de la série. Les adresses des auteurs des documents sont indiquées afin de donner aux lecteurs qui le désirent la possibilité d'entre en contact avec eux.

FOREWORD

Unesco's General Conference at its 19th session (Nairobi, Kenya, 1976) resolved that the Secretariat give particular attention to "gathering and disseminating information about new educational policies for the renewal of educational systems, adapted to specific needs on the basis of particular social, economic and cultural situations and aimed at promoting democratization of the systems within the framework of life-long education" (Programme Resolution 1.111).

In line with this mandate the Division of Educational Policy and Planning began in 1977 reproducing selected technical papers and distributing them as a series under the general title: "Reports, Studies ...". The aim of this series is to stimulate reflection and discussion on current issues confronting educational policy-makers, planners, administrators and school architects. Distribution is limited to Unesco officials at Headquarters and in the field, as well as interested technical personnel in governmental and private institutions. It is hoped that this series will promote and serve as a vehicle for increasing communication between individuals and institutions concerned with policy and planning aspects of education.

The "Reports, Studies ..." series consists of two sub-series : (i) papers with a subject orientation (numbered S.1, S.2, etc.) and (ii) papers focusing on a given country (numbered C.1, C.2, etc.). Subject papers deal with such topics as educational policies and legislation, planning and management techniques, planning and design of educational space and facilities, the relationship of education to productive work and employment, inter-country cooperation, the role of education in respect of the New International Economic Order, etc. Country papers are either brief profiles of the educational system of a particular country (mainly the LDCs) or treat a specific reform or aspect of the country's educational system.

Some of the papers reproduced in the series are "desk studies" based on information available within Unesco, others were originally prepared as background or discussion papers for a meeting or seminar, while still others are personal position papers representing part of a continuous dialogue within the Unesco Secretariat.

Papers are selected for the series on the basis of their topical interest. Readers should bear in mind that many, if not most, of the papers are working documents, unedited and not intended for public distribution. Some of the authors have written in a language other than their mother tongue, which explains certain linguistic deficiencies. It must also be stressed that the papers present the ideas of their respective author and do not necessarily reflect the policies of Unesco.

The Division of Educational Policy and Planning welcomes comments and suggestions concerning the series and invites readers to make known their reactions to particular ideas presented or to entire papers. In certain cases it may be possible to reproduce such comments and reactions in a subsequent issue of the series. For the convenience of readers who may wish to contact the author of a paper, the current contact address is given whenever possible.

Education and employment in Latin America

by Ernesto Schiefelbein(1) *

The analysis of the Latin American situation with foreign premises may lead to maximum possible misunderstanding. A few examples of assumptions differing from those of the developed world are initially presented. Some basic traits of the present situation are discussed in the following section; occupation, income, unemployment, and aspirations are studied taking into account several intervening variables such as sex, age, size of firm, sector of activity and length of unemployment. Historical trends are discussed next in order to provide a perspective for analysis. Expansion of labor markets, a sample of educational imbalances, technological change, labor mobility and community development are thus included in the discussion. Finally, several problems and guidelines for future development are studied and alternatives proposed for defining adjustments to actual educational policies.

Introduction

There are many differences between Latin American countries, but an effort is made in this paper to focus on similarities rather than differences.(2) It is assumed that in most countries the administrative structure is centralized, though they lack the information necessary to effectively control subordinates and thus lack the power to impose rule implementation on others. Centralized government systems prevailing in Latin America are responsible for hiring 70 to 90 per cent of teachers, physicians and lawyers in each country, as well as many other professionals, defining their educational requirements and affecting the salary levels of the market. In addition, professionals are usually organized in associations that look for legally protected areas of work. Many public jobs might be held only by certain types of professionals, thus non-certified training is little rewarded in the market and people have few incentives for such training.

People want to live near their elders. Few people in Latin America buy insurance, but rely on a sort of informal insurance cooperative system, pooling resources with relatives when problems arise. There are practically no "cushions" when a small businessman fails. So there is a trend to avoid risks. Traffic jams, crammed buses, permanent queues in front of public offices, empty counters and "come back tomorrow" answers are all signs of social disorder; they drastically limit good forecasting or the transparency of the market.

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* footnote : see notes at end of text.

Although unemployment levels in Latin America are far below the levels of, e.g., India, it is easy to observe many boys and adults selling fresh fruits, fried pies, beverages, lottery tickets or candy in the streets of the capital city. Adults check garbage cans for newspapers, tin cans, bottles and other recyclable items.

Latin American educational systems are structured after the European selectivity models. Only 20 to 50% of newcomers end Grade Six in primary. However, the Western model has led most countries to swell enrollments and to retain a large proportion of the school-age group during four to six school years. Blending both models results in extremely high rates of repetition in elementary grades, especially in the first grade. One out of two newcomers in the first grade are actually repeating in Latin America.(3)

Free schooling (incorrectly considered as a non selectivity measure) — together with the lack of truancy prevention and the high levels of unemployment — generate results quite different from those observed in developed countries. Children can stay in school as long as possible, if the family can survive without their economic activity, because no jobs are available, and, therefore, the cost of opportunity is near zero. On the other hand, if family survival depends on the efforts of each of its members, then children have to move out of the school and spend all their energy in getting money or food.

Post-secondary education has many outlets in developed countries but in Latin America it means only "university". In many Latin American countries university careers are offered primarily for night students. In those cases there are near zero opportunity costs, because study only competes with leisure time or moonlighting.

University is also patterned after the European model. High school graduates must choose a professional career in order to enter the university. It is therefore almost impossible to relate a Junior College system with the Latin American university system. Graduates from Junior Colleges would have to start from scratch in a professional school. In addition, many universities have a common curriculum for the specific career that each student must follow. However, that American invention, the Ph.D., is making an impact as a prerequisite for the university professor and in some cases for the rest of the labour market.

University graduates must apply for specialized jobs. Matching supply and demand is more and more difficult to achieve, because social pressure for more seats in the university tends to launch new low cost careers (those requiring a teacher and chalk), e.g. Social Scientist and Teacher. Therefore, in spite of the selectivity pattern, no guarantee of work is offered to graduates.

All levels of education are financed mainly by the government, the money being channeled through ministries of education. Decisions are centralized at the Ministry level, with all the pros and cons normal for this type or organization. In certain countries even changes in curricula or evaluation on primary and secondary levels must be approved by law or by presidential decree.

On the other hand it is worth noting that there are many indications of dynamism in Latin American societies. Enrolment ratio increments will

be commented on later. Several countries have succeeded in diversifying exportations. University professionals usually work fifty or sixty hours a week, though with low productivity in many cases. Teachers have to teach thirty to forty class hours a week, with salaries ranging from $50 to $200 a month. The system may be inefficient, but the work load is high.

Even this brief listing of instances where the premises of a man raised in a developed country differ from those of a Latin American may reduce errors in evaluating the situation, as presented below. It may be difficult to pinpoint ways in which decisions are influenced by considerations of geographic background, but influenced they are, and we must discover how before suitable policies can be designed.

A. The Present Situation

Comparisons across borders are usually preceded by many caveats. In spite of using common definitions for data collection worked out by the Inter American Statistical Institute (IASI) each Latin American country introduces changes that may interfere with cross-country studies. Data presented below have been carefully prepared in order to provide a meaningful comparative analysis.(4) However, some problems may still be affecting the results.

1. Education and occupation

The range of educational levels of employed and unemployed people in several Latin American cities is presented in Table 1. For employed males it goes from 4.6 years in Managua to 8.3 in Tegucigalpa (5), and is somewhat narrower for women (columns 1 and 9). However, both ranges are smaller than the gap existing in each country between the educational level of "employed" and that of those "looking for a first job" (columns 1 and 3, 9 and 11). This gap seems to contradict conventional thinking because in most cases those looking for a first job have a much higher schooling level. The differences seem to be explained by the latter group's lack of experience.

Education might partially explain unemployment. The unemployed with previous work experience have lower educational levels than the employed(6) (columns 1 and 2, 9 and 10). However, both averages are close enough to assume that distributions overlap. Therefore, there are many unemployed better educated than those employed. The small difference might only reflect the probability that once a worker is hired (and performs at the required minimum standard) the employer is not going to get rid of him in order to get someone with better training.

It should be noted that sex seems to be a key variable for determining the occupational situation. In several cities employed females have higher educational levels than employed males (compare columns 1 and 9). The types of job open to women may influence their levels of schooling. Many jobs for women are professional or paraprofessional. It may also be the case that upper-class women are freer to work, because they have a servant or live in an environment where attitudes towards women's work are more positive.

All employed women's schooling situation is better than the educational levels of inactive women (columns 9 and 12), while for men this is the case in only four of the nine cities (columns 1 and 4). This inverse

pattern by sex may reflect the fact that a higher proportion of men are continuing further education; that older women had been previously discriminated against in the educational system and, therefore, have less schooling; or that women's jobs such as teacher, nurse, or secretary require more education, while jobs with low educational requirements such as stevadore, ditchdigger or hodcarrier are not open to women. All these alternative suggest that employed women have to make an extra educational effort (in comparison with average women) in order to get a job.

Breaking down the previous table by ages provides some additional insights (see Table 2). Young unemployed women with work experience usually have more schooling than experienced unemployed men, suggesting some discrimination against women or some differences in the types of work looked for by members of each sex (column 2). Educational levels of males and females looking for a first job are generally similar (column 3).

Employed females below 25 years of age usually have similar education to the male corresponding groups (10% less at most)(column 1). But the educational difference by sex in the 25-54-year-old group ranges from 10 to 20% (column 5). Therefore, the educational gap between sexes would be closing with time and job openings may also be less discriminating by sexes.

Employed's schooling is growing with time (compare columns 1, 5 and 8). If jobs were randomly distributed among the employed population, the difference in schooling between the three age groups of Table 2would show that a trade-off exists between education and experience. Job levels seem to be even higher for older workers, therefore there would really be a trade-off between both variables.

Differences in educational levels between employed and unemployed seems to be decreasing for younger generations (columns 1 and 2, 5 and 6, 8 and 9). In fact, differences between employed and unemployed of the "under 25" groups are rather small (columns 1 and 2). In all five countries there seem to be available a fair amount of well-educated potential workers (at least as well educated as the employed). The analysis of partial evidence presented in the first two columns of Table 2 suggests that education would not be a bottleneck for economic development of the five countries.(7) However, certain types of experience or specialized training might be in high demand as shown in the classified advertisements in local newspapers and employers' interviews.

All the above comments suggest that relative differences in schooling rather than absolute educational levels would provide advantages in the labour market. In addition, higher priority might be given to the right place to seek on-the-job training and learning-by-doing opportunities than to initial salary levels. Data on income analyzed below will provide some additional insights on this topic of education and experience.

2. Education and income

Focusing the analysis on the employed population it is quite clear that schooling is positively related to income levels (see average incomes increasing from left to right in Table 3). But there are several other variables that have similar or larger impacts on income levels. Sex, age, type of occupation, sectors, size of the firm, migration and weekly schedule effects are commented on briefly below.

Table 3 shows that women's income is substantially lower than men's at each educational level. In each column women's averages are lower than men's in each city. When income is divided by the average years of schooling (see last column in Table 3), women's results range between 50 and 62% of the corresponding value for men in each city. Therefore, sex has a stronger influence over income than education. But within each sex, education plays a positive impact over income.

Table 4 shows the huge differences in salaries obtained in different sectors by people with the same level of education. Although the data is for Asunción (Paraguay), the figures seem to be representative of what happened in most Latin-American cities. It is worth nothing, once more, that education plays a significant role within each sector.

Table 5 shows that the effect of the size of the firm on income (20 to 50%) is smaller than the effect of education on income (near 100%, but in Santo Domingo lower for females). Age generates a smooth increment in male income averages till the 50th or 60th year, but the figures are not reported in this paper. There is no clear pattern of the effects of migrations, but in half of the survey results migrants are better off than natives. It is interesting to note that the higher the educational level, the shorter the weekly schedule and therefore the higher the "income obtained per hour of work".

In summary, education shows a positive effect on income in all situations, but the relationship is affected by a variety of other factors. Some of the intervening factors have a greater impact than education (as in the case of sex and sector) for obtaining better jobs and higher salaries.

Unfortunately, there is no evidence available on socio-economic background of workers nor reliable data on experience, only age. Schooling may only be a proxy of socio-economic status. Specific research should be carried out to improve the knowledge of these interactions in Latin America.

3. Education and unemployment

The influence of education on work may also be traced using data from the unemployed. For example, the unemployed with a permanent salary in their former job have better schooling than those with unstable salaries.

Table 6 shows that in all cases but one, those actively seeking jobs for more than 12 weeks have higher educational levels than those seeking a job for a shorter period. There are several alternative explanations that should be explored in future research projects.

There are no significant differences by sex in the education of the short-term unemployed (less than 12 per week). However, among the unemployed for a longer term, women have higher educational levels (columns 2 and 4). Several post hoc explanations may be suggested, but in all cases education would appear to be a key factor causing women to join the labour force.(3)

Educational levels also seem to be associated with more reational ways to look for a job. In Asunción, 59% of unemployed, and 69% of those looking for a first job, declared that they did nothing but ask friends about new job opportunities. For higher educational levels the percentage that used other channels (besides friends) was higher. For example, only 45% of people with some university training settled for asking friends about possible work, not trying alternative channels.

In spite of these positive hints about the effects of education, a comparison of educational averages of "unemployed for more than 12 weeks" with those working in small firms (see Table 5) — or those in jobs without stable salaries — shows that the differences in educational levels are small. Other factors, therefore, should partially explain unemployment. In other words, in the countries under study schooling would not be a serious constraint for further economic development.

4. Educational and occupational aspirations

Few of the people surveyed provided information about income levels required to start in a new job. Available information is presented in Table 7 together with the scanty data on actual income levels of the unemployed.

In several groups the actual level of income is much higher than required income levels. The unemployed seldom answered both questions at the same time,(9) which explains the low rate of response for actual or required income levels (presented in parentheses). It is possible that surveyed people's expectations of interview results may have affected their answers.

In summary, it is obvious that the quality of the basic data on occupational aspirations is low. The analysis of this data, therefore, should be done very carefully. The lack of consistency of the answers presented in Table 7 (columns 1 and 2, 3 and 4, 5 and 6, 7 and 8) suggests that there is little access to information about salary opportunities offered by the labour market. There are substantial differences between averages of different types of unemployed in most cities. In spite of the higher schooling levels for those unemployed for more than 12 weeks, there are, in several cases, lower income expectations than for those unemployed for less than 12 weeks. Differences between male and female expectations are rather small in comparison with the actual differences for those employed.

The analysis of average expected income levels may be misleading. There are several factors affecting the magnitude of expected incomes. For example, actual levels of education and experience might explain some of the distortions detected in Table 7.

Table 8 shows that the expected income for a new job is larger for the employed than for the unemployed. The gap tends to increase with age (suggesting the existence of positive experience effects). However, the differences in expectations between the employed and unemployed almost disappear when "expected income per average years of schooling" is computed. Thus education and experience might be accounting for a substantial share of the difference in expected incomes.(10)

A careful study of the original data (see Table 8) suggests that four to six years of education would be something of a threshold. Above that point older people seem to capitalize on previous experience and expect higher salary levels. Below it the effects of experience are rather small, even negative. In several cities there is an inverted U-shape relationship of experience and expected income in the "1 to 3" and "4 to 6" groups. Expected income increases for the younger group, while the "25-to-54 year-old" group decreases later on. Rather than experience, this relationship suggests the advantage of reaching peak physical capacity.

B. Analysis of Recent Trends

Data presented above show that education plays an important role in employment conditions, but also describes the effects of other relevant variables that may have an even larger impact on working conditions. The historical perspective presented below will complement the previous analysis and provide some guidelines for discussions of the strategies for improvement of education and training for work.

1. Expansion of labour markets and educational levels

During the fifties and sixties Latin America hoped that industrialization would create enough jobs to reduce unemployment. However, the share of employment in manufacturing has remained almost constant, about 14%, during the 1940-70 period.(11) The failure of the ECLA-sponsored policies led several countries to switch toward free exchange policies following the so-called "German miracle" model, but their effects on employment have yet to be assessed.

The relatively slow rate of growth of employment levels (when compared with expectations), has been larger than the rate of growth of population and, therefore, per capita income has also been steadily raised in the last three decades. However, the rate of growth of enrolments in the last decade (6.1%) was twice as large as the rate of growth of population (2.9%) and it was also larger than the rates of economic growth. As a result, the educational levels of the labour force have been raised (see Table 2).

Jobs open to individuals with higher levels of education have increased and the income per worker has also improved.(12) At the same time secondary and higher education have increased at 10% per year, while the rate of growth of primary education has only been 5%. Education therefore has increased at a quicker pace than the rest of the economy. As a result of these relative speeds, the economic value of a given education level seems to be reduced over time. The fact that the income of illiterate workers has kept pace with the rest of the labour force tends to support the previous comment.

A suitable hypothesis to explain the process above described cannot be made from the existing evidence. The human capital theory widely accepted in the sixties may have helped get additional money from the ministries of finance; industrial workers' unions were also interested in more education for their children; increasing access to new types of jobs and even to political roles may have led women to demand more education;(13) political parties have tried to use the eudcational system as a national communication channel and favoured hiring more partisan teachers; emphasis

on industrialization has also been related to more technical education; border disputes among countries have favoured a better educational coverage of regions under dispute; radio transistors and TV may also have some impact on the interest in education; and unemployment may also tend to increase the pressures for more education.(14) The international seminars and minimal targets for all Latin American countries agreed upon in several Conferences of Ministries of Education may also affect the rapid educational expansion observed in most countries.

Many of the Latin American countries have prepared human resources inventories and targets for development. Since the early sixties the Organization of American States (OAS) sponsored several seminars on human resources planning and the Organization for Economic Cooperation and Development (OECD) carried out two studies in Argentina and Peru.(15) A comparison of Chilean university graduate demands for the seventies, estimated from 1970 Census data in the early sixties, shows reasonable differences.(16) However, it is not possible to assess the influence of such studies in shaping the educational policies of Latin American countries. Vocational Training Programmes in Latin America have devoted some efforts to finding out required occupational skills and knowledge, but there is still a need for further research in this area.

The review of relevant research, therefore, does not provide clues as to whether the criteria for allocation of resources to education is closely related to employment needs or not.

In summary, education would have been supported by many social forces with little or no relation to the expansion of the labour market. As a result, educational standards for given jobs have been raised, (17) with small salary increments that lead to a reduction of income per year of education.

2. Employment and educational imbalances

The salary system reflects social prestige attached to different occupations and careers.(18) The huge differences between salaries for those with university levels and those with no education create distortions between supply and demand of human resources. Though many employers claim that more qualified manpower is required (especially for medium level positions); their claim is not always reflected in suitable salary levels for those job openings.(19) Also there is no interest in being trained through long-term courses for medium-level positions, but rather in being upgraded on the job or in short-term training courses. Most Latin American countries, however, are attempting to create an adequate supply assuming that the market will react later on.(20) In the meantime, the production structure of Latin American countries seems to require a relatively small proportion of skilled workers for the modern sector of the economy.

The outcome of this expansionist educational policy has not been too satisfactory at the university level. The previous emphasis on the need for training high-level human resources is almost gone. The steady emigration flow of qualified professionals and the high rates of growth of university enrolments point toward an oversupply of graduates from the third level. The excess of supply, however, does not mean lower

salaries.(21) Professional associations or colegios are fighting for legal protection. What started as a device to certify degrees of skill ended up as a source of pressure for raising the minimum requirements for qualification.(22) In spite of the claim that lawyers have no priority from an economic point of view the highest salary for a Chilean civil service professional corresponds to that of a lawyer. In many countries they have also kept their occupational possibilities.(23) Several jobs now can only be performed if the incumbent has a given degree or university certificate. University graduates have some monopolistic power over governmental decision-making and more jobs tend to be restricted to specific degree-holders. Thus, the whole salary structure is being twisted and university careers become more rewarding. Other groups, in the rural and marginal areas, however, have no bargaining power and investments in educational facilities for them are lagging.(24) These groups may assign high priority to education(25) but it is difficult for them to realize their expectations.

There seems to be an interest in rational choice among educational alternatives as reflected in the number of studies on the educational rate of return. There are estimated rates for at least ten Latin American countries.(26) In all countries but two, primary education yields higher rates of return than the other two levels. However, it seems that teachers have been included in all cases as university training and they have very low or negative rates of return.(27)

The last decade has shown a rapid increase in vocational education, in spite of increasing attacks on that type of education. "The most school can do is provide a broad technical foundation for on-the-job acquisition of specific skills".(28) However, studies in Colombia and Chile(29) show that graduates from vocational education obtain higher salaries than those from the "academic" track with the same number of approved years in the educational system.

There is a lack of transparency on labour market rewards for school training, although some students seem to know which options pay off.(30) In fact, ten per cent of students graduating from Chilean academic secondary education (those not going on to university) say they would choose vocational education if they had to begin secondary education all over again. Seventy-five per cent of students graduating from Chilean vocational secondary education say they would retain their original choice.(31) In a recent seminar held in Mexico(32) a group of experts agreed that social prestige of vocational education has been increasing. Enrolments in vocational schools are growing at a fast rate and several reforms have been attempted in order to close the gap between education and the market demand.(33) In some cases a highly "specialized" (post-primary) training provides its graduates with greater occupational flexibility than those academic courses that aim to offer this flexibility.(34)

But averages always hinder as much as they reveal. Vocational education includes several types of vocational training ranging from commercial education to industrial or agricultural training.(35) Results might be very different from one type of training to another. For example, agricultural secondary schools have been widely criticized but no objective evidence of their lack of success is available.(36) There are no follow-up studies with category breakdowns, so the relationship between types of training and labour market opportunities can only be

guessed at. Sometimes the gap between job requirements and vocational training depends on other factors. For example, Peruvian employers emphasize experience as a basic condition. Youngsters are discriminated against despite the amount and quality of their training, so that even when a job is available and there is a candidate to fill it, employment may not result.(37) This situation seems to be representative of other Latin American countries.

A negative aspect of the rapid development of technical education must be noted. Many students seem to be using vocational education as an indirect way to enter university.(38) If middle-level job opportunities are perceived as unattractive by most high-school graduates, then it should not be surprising that medium-level technical school seniors might choose to continue on to university to get a professional degree and the salaries associated with it.

It must be added that employers surveyed expressed dissatisfaction with graduates from the formal educational system, in terms of the gaps between their skills and job requirements and their salaries and career expectation(39).

Increasing awareness of alternative ways of educating people has led to increasing emphasis on non-formal education.(40) Several surveys on this type of education have been carried out in Latin America (41). Non-formal educational programmes range from, on the one hand, very systematic institutions like the Army or IBM training courses(42) and the accelerated training systems like SENA, Servicio Nacional de Aprendizaje (SENAI), Servicio Nacional de Adiestramiento de Industria y Turismo (SENATI) and other similar Latin American institutions to, on the other hand, profit-seeking "academias" or church activities. In between quasi-formal industrial training programmes and unorthodox academies of "concientización" methods(43) one can cite correspondence courses, mobile training units, rural "animación" or community development programmes, agrarian reform extension, penal shops, cooperative training, supervised rural loans, sports programmes for youth, games and rural leadership.

A tracer study carried out in Chile shows that half of the non-formal courses are taken to "improve the probability of getting a job or improving the chance of obtaining better work".(44) However, data from Venezuela suggests that non-formal training is rewarded by firms only when the firms have selected the workers for that training.(45)

Frictional unemployment and the gaps between the qualifications required for certain jobs and the incumbents' training may aggravate the problem of unemployment among the educated. Several studies on labour market functioning show that hiring new workers depends on personal contacts rather than systematic job information.(46) The need for adequate channels on job demand and supply, placement and support services is clear. Younger workers, with adequate educational attainment levels, have low earnings, difficulty entering the labour force and instability in employment. They require more than schooling. They need orientation to the work world, including the study of job requirements, study of their own aptitudes, skills and preferences, and access to labour market information on finding work and improving job and career lines.

3. Productivity and Education

In a study of five agricultural areas of Eastern Brazil, schooling had no significance statistically in the value-added production of traditional areas, only in the most modernized ones.(48)

A job performance study undertaken in ten Mexican organizations concluded that "differences in educational level (spanning on average 6-7 years of schooling) appear to be unrelated to supervisors' ratings of individual productivity among groups of people doing the same job".(48) Several studies suggest that the salary for a job is fixed in advance according to minimum requisites, so that no premium is paid for education.(49) However, premiums may be offered for additional experience or loyalty.(50)

Recent research on educational production functions(51) casts some additional doubt on the available rate or return studies. Schooling seems to explain only a fraction of achievement levels;(52) therefore in future, the flow of additional income wholly assigned to educational differentials should be proportionately reduced. On the other hand, studies of the "residual" sources of growth show that growth might still be related to education.(53) This approach should be further examined in the future because preliminary explorations on the effects of values (n-achievement n-affiliation and n-power) on the Gross National Product, as measured seven to ten years later, have shown high correlation coefficients.(54)

The evolution of educational levels and output per worker in Latin America seems to follow international patterns. PREALC has estimated the occupational structure of El Salvador and Chile with the OECD fitted functions(55) using the output per worker figures in 1971 and 1970, respectively.(56) The differences with respect to the census figures of the respective years are quite small. PREALC has also made comparisons of the Bolivian structure in 1950 and the Paraguayan structure in 1962 and 1972 with similar results.(57) Although these results are not conclusive they suggest that productivity and education are associated, no matter what causal relationship exists between them.

In spite of the lack of objective data on the relationships between education and productivity, Latin American countries have developed special programmes for managers.(58) Some research seems to emphasize the need for achievement (59) as one of the key factors for development, but research shows on the other hand that the educational system does not reinforce the n-achievement level;(60) the ability to understand instructions in order to receive technical assistance could also be linked to productivity, and self-confidence might be an important factor; but Latin-American schools seem to reduce self-confidence, especially with respect to students from low socio-economic strata.(61) Curriculum changes designed to encourage scientific thought might also be related to productivity, but this has yet to be clearly demonstrated. Efforts to channel a higher proportion of secondary school pupils into vocational education and into middle-level occupations (rather than into universities) may also be listed here, but "if opportunities in the middle-level occupations continue to be perceived as unattractive by most final-year students, it should not be surprising that secondary school seniors might choose to continue on to university in hopes of entering the ranks of the professions".(62)

4. Technological change and skill labelling

The formal educational system is especially slow in reacting to new openings in the labour market. In Latin America, most of the arts and crafts curriculum in elementary and high school is actually centred on paper- and woodwork. A very few schools are introducing some elements of electricity, plumbing or masonry. The schools of Latin America are in fact still adapted to the technological needs of the nineteenth century.

New jobs are being created through efforts of Agrarian Reform. However, no systematic evaluation of these jobs nor of the required training that might be duplicated in other regions, is being made. "Schooling specifically designed for rural settings and work has often been resented by rural parents and children and viewed as inferior programmes designed to keep students trapped in precisely the conditions that they and their parents wish to escape"(63). Only accelerated professional training may be successful in such an environment.

New sectors of activity or the introduction of new technology always involve the creation of new jobs or the redefinition of job entry requirements. In most cases the training is carried out within the private sector. For example, most of the training for computer processing personnel is done by the manufacturers, or by private profit-seeking academies. The training for the maintenance of certain cars (Ford, Chevrolet, Mercedes, VW, Peugeot, Toyota, etc.), typewriters, razors, sewing machines, refrigerators, TV and radios and other appliances, is also provided by the manufacturers. Introduction of new products too is associated with different degrees of training(64).

In some cases new industries hire new personnel with substantially higher educational levels than average workers in the country in order to facilitate the initial training process(65). Once the firm is in full operation, the requirements for new workers are lowered to the market levels.

Many transnational firms are starting operations in Latin America. They tend to use their standard managerial methods, including job evaluation, for fixing salaries and manuals for the selection and promotion of workers. Objective evidence is usually weighted in the decision process and therefore education certificates and former experience become increasingly important in the recruitment process. This trend may affect the potion of the people in the informal sector who have already gained the knowledge to do a job or the qualifications to warrant one, but have done so by themselves (self-taught). Several Latin American institutions are trying to build up a "bank of test items" to certify levels of knowledge and skills to reduce the well-known problems that "credentialism" creates for adults who did not have the opportunity early in their lives to take part in the regular educational system. At the same time training institutions are trying to establish equivalences between their degrees and those of the formal system, specially for the apprenticeship programmes(66). Thus some of the graduates from training institutions might continue regular studies later on, or might at least be given a fair evaluation when applying for a job in a modern firm.

5. Labour mobility and educational values

Education has often been described as a mirror of society. Little alternation of that definition may be expected. However, employment strategies require reallocation of resources, i.e., flexible movement of people among jobs, sectors or geographical regions. People must adjust to developmental trends and it is worthwhile to know the effects of education on attitudes and values. This is an aspect usually neglected in the analysis of education and work.

The change of traditional patterns is usually associated with modern attitudes(67). In one Latin American country the attitudes of elementary students are different from their parents' attitudes(68), while in others the educational system would be providing such characteristics only at the secondary level(69). Given that only 20 to 30 per cent of the population today reaches the secondary level, most of the labour force cannot be expected to adopt modern attitudes. In fact, practically all the blue collar labour force does not reach the secondary level. It is interesting therefore, to question whether elementary education might not be modified to instill those modern attitudes in graduates.

Reallocation of resources is also related to risk taking. Attempts to instill profit-maximising techniques in rural areas always clash with the risk aversion of peasants. For example, a good breeding cow with a lower production cost may represent a higher risk than three native cows, although the milk production could be similar; it might be necessary to get a loan from an unknown institution called "a bank"; the production techniques of the imported cow and its resistance to disease are not well-known; besides, when cash is needed it is possible to sell one of the three native cows. Thus education "should emphasize techniques designed to minimise risks, or if 'adequate cushions' were made available to overcome some of the risks involved"(70). In almost all countries pilot projects to transform elementary schools in centres of agricultural innovation have been implemented. Results, however, have not been very successful. Only a few charismatic principles have been able to succeed in teaching people how to be efficient with respect to given risk levels. In any case, some education is required to understand decision-under-risk mechanisms.

Movements from one sector to another require a general orientation to the world of work, which would include the study of job requirements, the individual's study of his own aptitudes, skills and preferences, and labour market information on finding a job and career lines(71). Studies indicate that some young people may be staying unemployed for long periods because of their unreal expectations about their own capacity and earning potential. Actually moving into a different occupation might require training in "recurrent education" centres or in accelerated training institutions. The Latin American professional training system is well prepared for the latter task and substantial increases in apprenticeship and youth programme are already planned(72).

6. Community Development

Employment strategies designed for Latin America emphasize the need for a new social order where multiple channels facilitate discussion and agreement on global policies. But education in Latin America is based on individual competition where success for one means failure for a classmate or another postulant. However, the need for affiliation (the need to be accepted by relatives or peers) in Latin American countries is high(73) in comparison with more developed countries. But high need for affiliation without a corresponding high need for achievement would not help to stimulate development. Many Latin American students look for a degree as a "paper qualification" to get a job and not as a way to self-realisation.

For some sectors of the population, the problem is firstly to integrate them into society and then to provide them with employment. Formal educational systems are not prepared to cope with these marginal groups(74). However, some attempts must be mentioned. Complementary education in Brazil (Ensino Supletivo) based on modules has been able to provide additional opportunities for peasants and members of the urban informal sector(75). The Rondon Project recruits Brazilian university students for one to two months for community action work(76). Similar projects have been implemented in Colombia and Chile. Production Schools in Panama have promoted agricultural groups made up of adults and youth and staff training(77). UNICEF has promoted several integrated rural development projects. Chiapas in Mexico, Los Lagos in Chile, Cotopaxi and Los Rios in Ecuador and Chuquisaca and Tarija in Bolivia ma be mentioned as excellent examples of this type of approach(78).

In all these projects, education is inserted as a built-in part of the design. Education results should support production efforts and vice versa. A multisectorial and concerted approach to the problem of development nd training for cooperative and self-sustained efforts are the main characteristics of all the projects.

UNICEF is studying its eventual participation in similar projects for the urban areas. The main idea is to expand and improve social services in slums and shanty town areas of major Latin American cities. Many of the above mentioned non-formal projects are somewhat related to the same population target.

C. Options for the Future

Work and school or training and education define two different realms. There are many complex operations undertaken by artisans that do not require any previous theoretical knowledge but are acquired through a long practical experience(79). On the other hand, it is possible to rank occupations "according to their demand for cognitive and abstracts components needed in their execution(80). However, it seems that in general, the higher the education previously reached, the shorter the training period required to perform a given job with a minimum proficiency. The specific linkages between these two concepts in a given situation tend to become blurred when the analysis is carried out at the macro level. An effort to identify problems for specific groups is made in the following paragraphs. But even further desaggregation should be reached for defining changes in actual policies.

1. Matching education, training and the needs of the informal sector

Most of the educational and training opportunities are only available to people either working or planning to join the formal sector of the economy. As a result there is a reluctance to provide more training opportunities than the needs detected in a given market, because the recruitment of a trained worker would imply the loss of his job for another. This view might be correct for the wage earners of the formal sector, but it does not apply to the large proportion of the self-employed workers of the informal sector. More training for the self-employed may generate higher productivity through better use of scarce capital goods, clever processing of raw materials or more efficient administrative and commercial procedures(81).

The large number of potential trainees in the informal sector suggests the use of mass media as the only way to provide full coverage. Such courses are more successful when initial contacts are made by ra given the wide availability of transistor radios, encouraging workers to buy periodicals where materials are printed and to attend certain T broadcasting of classes or demonstrations. If efficient post offices are available in the country, further contact by mail may be sought. Organization and operation of small businesses, marketing, book-keeping, tax law, credit management or borrowing money from banks are some examples of subjects that may be offered in these types of programmes(82).

When the subject-matter does not lend itself to mass media delivery, special field programmes should be tailored. Groups to whom training can be provided, given common traits in residence, employment patterns or work schedules, should be identified. Workers in industries whose products are likely to remain competitive in the near future should be preferred. Local organization might also have some advantages when priorities should be assigned. Mobile units should be available to complement these efforts(83).

Short courses or "modules" should be preferred. Each one might be rapidly assimilated and later on combined with other units. On the other hand, time spent going over subjects already studies may be minimized. A real effort must be made to show students from the informal sector ways of solving problems which do not depend upon the use of sophisticated technology.

If possible, retraining of persons working in occupations that have no potential for future expansion or will tend to disappear, should also be provided. Detecting intra- or intersectoral transfers might be difficult, but previous identification or groups that fulfill the above mentioned criteria may help in finding suitable openings.

Many public services provided free or charging low fees tend to be used by better-off people. It is necessary to ensure that training programmes do effectively reach members of the informal sector. This seems feasible if this goal is explicitly and systematically pursued and that the necessary financial support is provided.

2. Matching formal education and employment in the formal sector

Surveys carried out in Chile, Paraguay and the Dominican Republic(84) show that employers know very little about vocational education institutions and their graduates. There is a need for better diffusion of the types of training provided by each institution, both for employers and employees.

There seems to be wide differences in salaries for the same type of job may be as a result of the usual type of job search through relatives and friends rather than through impersonal mechanisms(85). The latter have been suggested in many opportunities but all attempts to set up those mechanisms in Latin America have failed. As an alternative, the trainees should be taught ways to keep themselves informed about current salaries for similar occupations. It should be recalled however, that employers give a negative weight to applicants having frequently changed jobs.

Labour market protection for university graduates should also be eliminated in order to allow people with suitable qualifications but with no university degree to postulate for presently protected jobs. These types of measures for increasing equality of op ortunities should be complemented with Certification Services that can test applicants in different professions. Equivalences between degrees from training institutions and the formal system should also be worked out to allow trainees to continue further education.

In those countries with several vocational programmes preparing for the same type of jobs, some evaluative research should be carried out in order to improve (or eliminate) those programmes that are relatively inefficient(86). Accelerated training, even if more expensive than formal vocational training, should be available to cope with the needs for preparing workers in a shorter period of time.

In most Latin American countries, training is financed by taxes paid by the enterprises. As a result, courses currently offered depend on the qualifications considered necessary by modern enterprises. Therefore, there is a strong trend towards modern technology. Small firms using more traditional equipment may have problems in finding qualified workers. Some of the suggestions made for the informal sector may also be relevant for small business.

3. Education and training for the rural areas

The common pattern in most Latin American countries is the complete lack of representation of agricultural labourers by the end of primary education(87). Those who finish elementary education increase their probability of moving into urban areas. Therefore emphasis should be placed on what can be learnt in the first four years that rural children attend the educational system.

Panama and other countries have experimented with "production schools" as a way to cope with some of the traditional rural problems. These schools have a curriculum adapted to the local conditions and based on productive acrivities as the core of the educational experience(88). Most of these schools have a boarding system for students living far away. The "production schools" are based on cooperative efforts of neighbours, parents, teachers and the government. In those cases where the experience is well developed, some by-products in terms of community organization, diffusion of the "learning by doing" approach and raising of the cultural level of the community is observed. Close monitoring and selection of charismatic principals and teachers seem to be the main requirements.

Accelerated training opportunities for the rural areas are scarce in most countries. Food processing, the manufacture of goods made from wood or vegetable fibres or miscellaneous trades such as brush, broom or button making are examples of the types of training that should be offered in the rural areas. It is true that traditional skills (e.g. food processing or preserving) are passed down from one generation to another in particular families or groups, but improvement and management of the marketing may be included in short training courses for the rural areas.

"Integrated projects" covering both employment creation and training should be privileged for the rural areas. They call for the collaboration of various public bodies not only with respect to their production, transport, marketing, finance, administration and equipment aspects, but also in the fields of law, taxation, and occupational safety(89). It is difficult to concert the operations of such an array of different interests, but unless the coordination is obtained, little change may be expected. In some projects an intensive campaign of training and information among the population is required in order to get adequate support and enthusiastic participation.

4. Limitations

Attempts to improve the matching between education and work do not necessarily ensure a similar improvement in income distribution. Evidence suggests that "expansion of formal schooling may be accompanied by increasing inequality in the distribution of income"(90) as in the case of Mexico and Brazil(91) or by changes in the opposite direction as in the case of Chile and Cuba(92).

The financing of educational policies must also be taken into account in policy design. Recent studies for Colombia, Brazil and Chile show a redistributive effect of expenses in education in favour of the middle income groups of the population(93). But charging fees (specially in higher education) would also affect the demand for education. Therefore, the financing aspects of the alternative proposals should be carefully examined(94). In general, as mentioned above, policies must be designed taking into account the socio-political and cultural constraints operating in the Latin American context(95).

5. Concluding remarks

Partial evidence suggests that non-formal courses help to specify occupational opportunities. Among students who attended "Liceos", those who had work-related non-formal education are more likely to be in white collar jobs; among those who attended vocational schools, those who had such non-formal courses are more likely to be in blue collar jobs(96). Therefore, non-formal education should be fostered as a way to provide alternative types of education directly related to specific job oriented interests.

Research on values and economic drive(97) suggests that increasing the "need for achievement" will also generate higher levels of economic development. There are a certain number of successful experiences in manipulating those values through appropriate tools. This is a line that should be explored in more detail. Changing values mean a departure from traditional cultural patterns, but development always implies a social cost in terms of the replacement of traditions and cultural values.

Finally, it must be noted that educational activities are labour intensive (including both teachers and students), and in countries with high levels of unemployment the opportunity cost of education from a social point of view might be near zero. Therefore, the expansion of educational opportunities might be pursued even if the expected payoffs are considerably low. Reduction of unemployment through expansion of education might lead to a more efficient allocation of resources and an increase in productivity by working with a more highly trained labour force.

NOTES

(The acronym "RAE" refers to "Resumenes Analíticos en Educación", where the material is available).

1/ I am indebted to María Clara Grossi who prepared the tables and gethered available research on this topic. Hans Reiff made valuable comments to the draft version.

2/ Atypical cases are not included. For example, the Cuban experience in spite of being of extreme interest cannot be replicated in other L.A. countries unless similar social changes at large also take place Therefore, it is not included in this paper. Former British colonies are also excluded, because of the marked differences from those countries of Spanish or Portuguese origen.

3/ E. Schiefelbein, "Repeating: an overlooked problem of Latin American Education", Comparative Education Review, Vol. 19, No. 3, October 1975.

4/ Methodology is described in E. Schiefelbein, "Education and Employment in ten Latin American Cities", paper presented at the annual meeting of the Comparative and International Educational Society, Mexico, March 1978.

5/ Sampling procedures and errors are described in the following publications: "Educación, Capacitación y Empleo", Situación y perspectivas del Empleo en El Salvador, capítulo IX del Tomo II, PREALC/80, Santiago, abril 1975; "Relaciones entre educación y empleo en la República de Chile", en Antecedentes para la planificación de los Recursos Humanos en Chile, PREALC/118, Santiago, julio 1977; "Relaciones entre Educación y Empleo en la República Dominicana", en Los Recursos Humanos y el Empleo en la República Dominicana, Vol. II del Educational Development Center, Newton, Massachusetts, 1976; "Relaciones entre Educación y Empleo en El Paraguay", Revista Paraguaya de Sociología, Asunción (por aparecer); Situación y Perspectivas del empleo en Nicaragua, PREALC/63, Santiago, octubre 1973.

6/ In one of the cities, experienced unemployed males have a slighty higher educational level than those employed.

7/ Unemployment will be discussed below in more detail.

8/ Among people out of the labor force those that would like to work (although not actively seeking for a job) have higher educational levels than those that would not. The difference between both groups is wider for women than for men.

9/ For example, from 113 unemployed in Managua only 56 declared the expected income in a new job. Their answers are lower than the average actual income of other 25 unemployed. Most of the latter group did not declared the expected income in a new job.

10/ Data suggest that education makes expectations to be more realistics. New tabulations would be required to explore this line in some detail, because Peruvian data suggest no difference in expectations between students in different stages of the education system."This finding would suggest that students do not, when approaching the labour market, change their minds", see

Jan Versluis, "Labour Market Expectations of Secondary and University Students in the Lima Metropolitan Area", Education and Employment, Working paper No.3, WEP 2-18/WP 3, International Labour Office, Geneva, December 1974.

11/ Joseph Ramos, "Para la puesta al día de algunos generalistas", mimeo, PREALC, 1978.

12/ Rodrigo A. Medellín y Carlos Muñoz Izquierdo, "Incremento de la población, capacitación y empleo en México (1960-1970), en Colección de Lecturas Selectas, Sección Tercera: Educación, Capacitación y Empleo, IDE, Banco Mundial, spetiembre 1977.

13/ Paz Covarrubias and R. Franco, Chile: Mujer y Sociedad, UNICEF, 1978.

No differences were found among sexes with regard to drop out rates in Peru.See Jan Versluis, "Labour Market Expectations of Secondary and University Students in the Lima Metropolitan Area", Education and Employment, Working Paper No.1, WEP 2-18, International Labour Office, Geneva, October 1974.

14/ Unemployed try to get more education in order to increase their employment probability. However, when unemployment is too high the family needs the help of each one of their members for survival and pressures for getting more education decline.

15/ OECD, Problems of Human Resources Planning in Latin America and in the Mediterranean Regional Project Countries, Paris, 1967, (RAE 163). See also RAE 51, 106, 168, 171, 181 and 186; CINTERFOR, Estudios y Monografías No. 17, 1975.

16/ E. Schiefelbein, Diagnóstico del sistema educacional chileno en 1970, Departamento de Economía, Universidad de Chile, 1976.

17/ Nigel Brooke, "The attitudes of Mexican Employers to education: A test of Human Capital Theory", Institute of Development Studies, Universidad de Sussex, Brighton, Inglaterra, pg. 15.

18/ Bertram Hutchinson, "hierarquía de prestigio das ocupaçoes segundo os estudantes universitarios" in Educaçao e Ciencias Sociais No 2, Rio de Janeiro, 1956; Carlo Castaldi, "Nota sobre a hierarquía de prestigio das ocupaçoes segundo um grupo de emigrantes italianos e seus descendentes na cidade de Sao Paulo", in Educaçao e Ciencias Sociais No. 3, Rio de Janeiro, 1956.

19/ Antonio Cabral de Andrade, "Estrategias y políticas de empleo" en Informes CINTERFOR, Formación profesional, educación y empleo, Montevideo, 1973, page 80. In spite of all, managers endorse comprehensive credentialism see James Bruno and Cornelis Van Zeyl, "Educational Innovation and Social Ideology in Latin America", published in Spanish as "Innovación educativa e ideología social en un sector de Venezuela", in Revista del Centro de Estudios Educativos, Vol. V No.1, January 1975.

20/ Oscar Tangelson, Empleo y formación profesional en América Latina, CINTERFOR, Dem. 121, 1974, page 71. See also CINTERFOR, Estudios y Monografías No. 17, Montevideo, 1975.

21/ Some countries would have massified the university level for medium level position with low salaries, while sending abroad the managerial elite that will receive high rewards. See Edmundo Flores, Vieja revolución, nuevos problemas, Editorial J. Mortiz, Mexico, 1970, pages 102-7.

22/ On the other hand the over supply of university graduates works as an incentive for taking up university education", as found in Peru by Jan Versluis, "Labour Market Expectations of Secondary and University Students in the Lima Metropolitan Area", Education and Employment, Working Paper No.2, WEP 2-18, International Labour Office, Geneva, December 1974. The issue seems to have similar traits around the world.See Mark Blaug, La educación y el problema del empleo en los países en desarrollo, International Labour Office, Geneva, 1974, page 36

23/ United Nations, Educación, recursos humanos y desarrollo en América Latina, New York, page 121.

24/ Jacques Gelinas, "El campesinado boliviano y el sistema educacional" in Escuela de Educación, Santiago, 1974 (RAE 201); Noel McGinn and Ernesto Schiefelbein, The Press and the Educational Reform of 1965-1970, mimeo, Harvard University, 1973, page 29.

25/ Adolfo Gurrieri, Situación y perspectivas de la juventud en una población urbana popular, E/LACCY/BP/L.2, CEPAL, Santiago, 1967; Peter Heinz, A Study of Educational Sociology, mimeo, VII Congreso Latinoamericano de Sociología, Bogotá, 1964.

26/ F. Swett, Formal and Non-Formal Education in Educational Development, Princenton University, mimeo, 1974, page 10-11; Alan Sorkin "Education and Income in Chile", in Journal of Economic Studies, Vol. I No.1, May 1974, See also, PREALC Reports on Nicaragua and Dominican Republic and Martin Carnoy, "Rates of Return to Schooling in Latin America", in Journal of Human Resources, Vol. 2 No.3, 1967. Unfortunately, there are no estimations for specific groups, for example, which is the rate of return for a peasant? It may be argued these types of studies tend to understate the true effect of education because the role of education could be to move people to the right place, but the high rates of urban unemployment may dismiss the objection.

27/ J. Morales, E. Schiefelbein y J. Rodríguez, "Rentabilidad privada y social de la educación superior en la primera y segunda región del país", Estudios Sociales No. 14, 1977; Servicios de Información de las Naciones Unidas en Santiago, "Maestros: salarios más bajos que los trabajadores industriales", en Micronoticias MS-78-4, 27 de enero de 1978.

28/ Mark Blaug, Education and the Employment Problem in the Dominican Republic, ILO, Geneva, 1973, page 18.

29/ George Psacharopoulos, Returns to Education: An International Comparison, Elsevier, 1972; Ernesto Schiefelbein, Educación y Empleo en Chile, draft version, Santiago, PREALC, 1975; Joseph Ramos, Labour and Development in Latin America, New York, Columbia University Press, 1970.

30/ ILO, Informe sobre las consecuencias socioeconómicas de los cursos Carrera Tecnológica (CT), Proyecto CHI/69/538, Santiago, November 1973, pages 1-25.

31/ Joseph Fisher, Factors Associated with College Aspirations and Expectations of Chilean Secondary School Pupils, thesis, Chicago University, 1971 (RAE 54). On the other hand, some vocational schools in Sao Paulo have achieved legitimacy because their graduates pass the rigorous university entrance test. (see Havighurst, R.J. and Gouveia, A.J., Brazilian Secondary Education and Socioeconomic Development, Praeger, 1969.

32/ OAS, Educación para el desarrollo del individuo, de la fuerza de trabajo y de la sociedad nacional, Proyecto Internacional de educación tecnica, Cuernavaca, 1973.

33/ José De Simone, La evolución de la educación técnica y profesional en América Latina en el período 1965-74, Oficina Regional de Educación de UNESCO, Proyecto RLA/70/507, PNUD-UNESCO, Santiago, 1975.

34/ Claudio De Moura Castro, "Academic Education versus Technical Education: Which is more general? in UCLA Latin America Studies Series, Vol. 30, 1975.

35/ Ernesto Babino, Panorama de la Educación Técnica en América Latina, Consejo Nacional de Educación Técnica, Buenos Aires.

36/ Secretaría de Cultura y Educación, Situación de la educación y formación profesional agropecuaria en la República Argentina, Buenos Aires, 1968, 168 pages.

37/ Antonio Cabral de Andrade, "Estrategias y políticas ...", op. cit., page 80.

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Table 1.- Educational levels by occupational status and sex in nine Latin American cities

Cities	Males								Females			
	Total Males				Total Household heads							
	Employed	Unemployed	Looking for 1st job	Economically non actives	Employed	Unemployed	Looking for 1st job	Economically non actives	Employed	Unemployed	Looking for 1st job	Economically non actives
Managua	4.6 (409)	4.1 (113)	9.0 (37)	5.3 (88)	4.5 (222)	3.0 (43)	- -	1.0 (8)	4.6 (220)	4.0 (75)	4.9 (51)	3.4 (336)
Santo Domingo	6.8 (454)	5.3 (278)	7.6 (122)	7.5 (246)	6.4 (540)	3.9 (93)	3.0 (7)	5.1 (36)	6.6 (378)	5.8 (169)	7.0 (205)	5.4 (1066)
Santiago de los Caballeros	7.5 (397)	5.6 (44)	8.0 (11)	6.8 (81)	7.8 (237)	4.0 (14)	- (1)	6.0 (9)	8.0 (183)	5.9 (31)	7.4 (27)	6.3 (466)
San Salvador	7.9 (1098)	6.7 (98)	7.4 (33)	6.2 (561)					7.0 (926)	7.0 (76)	8.0 (38)	6.2 (957)
Asunción	7.7 (1272)	6.5 (134)	7.6 (66)	7.0 (480)					6.7 (950)	6.1 (102)	7.9 (54)	6.1 (1423)
Tegucigalpa	8.3 (3575)	6.0 (232)	6.7 (51)	7.0 (1987)					7.1 (2261)	6.4 (138)	7.1 (102)	6.0 (4872)
Lota y Coronel, 1970	5.7 (905)	5.0 (137)	6.5 (69)	6.5 (513)	5.6 (608)	5.0 (39)	- -	5.5 (22)	6.4 (280)	5.8 (9)	6.0 (27)	5.6 (1563)
Lota y Coronel, 1971	5.7 (994)	5.9 (76)	5.7 (67)	6.5 (549)	5.6 (656)	5.9 (17)	- -	4.2 (36)	6.3 (271)	5.6 (19)	5.4 (22)	5.7 (1502)
Concepción y Talcahuano, 1970	7.3 (1084)	5.9 (110)	7.3 (16)	7.9 (465)	7.5 (684)	5.1 (44)	- -	8.4 (25)	7.4 (538)	6.8 (28)	7.2 (25)	6.9 (1498)
Concepción y Talcahuano, 1971	7.3 (1112)	5.7 (100)	5.9 (21)	8.0 (505)	7.4 (669)	5.1 (38)	- -	7.3 (6	7.5 (512)	5.4 (10)	6.9 (17)	6.8 (1509)
Santiago de Chile, 1970	8.1 (3287)	5.9 (243)	8.4 (42)	8.3 (1218)	8.3 (1763)	5.4 (77)	- -	6.7 (53)	7.7 (2010)	6.9 (73)	8.7 (35)	7.5 (3973)
Santiago de Chile, 1971	8.1 (3353)	7.0 (192)	9.4 (35)	8.6 (1343)	8.3 (1901)	6.7 (83)	- -	8.0 (81)	7.5 (2098)	7.6 (40)	9.0 (32)	7.5 (3527)

Source: PREALC, special tabulations.

Nota: In parenthesis frequencies are shown.

Table 2.- Educational level by ocupational status, age and sex in six Latin American cities

Sex / Cities	25 years of age or less				25 to 54 years of age			More than 54 years of ag		
	Economically actives			Economically non actives	Economically actives		Economically non actives	Economically actives		Economically non actives
	Employed	Unemployed			Employed	Unemployed		Employed	Unemployed	
		With experience	Looking for 1st job							
Males										
Managua	6.4 (101)	5.5 (42)	6.4 (37)	7.5 (52)	4.5 (274)	3.3 (54)	1.9 (11)	2.6 (27)	2.7 (13)	2.1 (19)
Santo Domingo	7.0 (179)	6.6 (114)	8.4 (97)	8.8 (144)	5.9 (528)	4.3 (118)	6.2 (54)	5.4 (61)	4.0 (35)	4.4 (35)
Stgo. de los Caballeros	7.4 (69)	5.7 (14)	8.3 (9)	9.8 (44)	7.6 (241)	5.2 (21)	5.9 (15)	5.8 (44)	4.4* (5)	4.2 (20)
San Salvador	7.2 (274)	7.4 (53)	7.4 (28)	6.2 (514)	8.4 (696)	5.9 (40)	10,3 (14)	6.5 (123)	6.0* (5)	5.5 (33)
Asunción	7.5 (325)	7.6 (53)	7.5 (78)	7.2 (325)	8.0 (758)	5.3 (27)	6.4 (51)	6.1 (145)	4.2 (18)	5.5 (85)
Santiago de Chile	7.6 (646)	6.1 (76)	9.0 (37)	9.2 (606)	8.6 (1980)	5.7 (97)	7.2 (152)	8.1 (348)	5.1 (32)	7.6 (290)
Females										
Managua	5.8 (77)	5.2 (35)	5.0 (44)	5.3 (89)	4.0 (130)	3.0 (39)	2.9 (7)	1.0 (7)	- -	1.2 (45)
Santo Domingo	6.7 (79)	7.1 (59)	8.2 (137)	7.2 (391)	5.0 (183)	5.1 (100)	4.5 (511)	3.7 (26)	5.0* (2)	3.1 (141)
Stgo. de los Caballeros	10.0 (40)	6.6 (12)	8.3 (20)	8.4 (162)	7.3 (113)	5.3 (16)	5.4 (223)	7.4 (14)	- -	4.0 (69)
San Salvador	7.0 (323)	7.5 (43)	8.1 (33)	6.1 (574)	7.2 (552)	6.4 (31)	6.7 (244)	4.6 (48)	4.0* (2)	5.8 (134)
Asunción	6.6 (299)	6.8 (43)	8.6 (45)	7.1 (600)	6.8 (553)	4.9 (33)	5.8 (476)	5.0 (55)	-	4.1 (305)
Santiago de Chile	7.3 (479)	7.2 (33)	9.0 (27)	8.2 (1083)	8.0 (1107)	4.0* (1)	7.6* (5)	6.3 (130)	6.4 (33)	7.1 (1688)

Source: PREALC, special tabulations.

Note: an asterisc shows non significative frecuencies.

Table 3.- Income of employed population by level of schooling (currency of each country)

Sex / Cities	Years of education					Total	Average income per year of schooling
	None	1 to 3 years	4 to 6 years	7 to 12 years	13 years & more		
Males							
Managua							30.4
Santo Domingo*		31 (136)	33 (126)	42 (149)	66 (26)	37 (437)	
Santo Domingo***		31**	29	38	58	-	5.4
Stgo. de los Caballeros***		28**	33	46	112	-	6.8
Santiago de Chile		829 (276)	1032 (1117)	2069 (1788)	5906 (323)	1994 (3504)	254.0
Females							
Managua							19.1
Santo Domingo***		14	18	24	24	-	2.7
Stgo. de los Caballeros***		14	22	29	64	-	3.9
Stgo. de Chile		555 (262)	697 (811)	1196 (1034)	2531 (165)	1041 (2272)	129.5
Males & Females							
Asunción		1220*	1938	2724	6642	2622	
San Salvador		27* (636)	40 (726)	134 (586)	235 (233)	72 (2222)	
Tegucigalpa	30.6 (727)	35.0 (1173)	40.4 (1917)	67.4 (1693)	144.4 (536)	55. (6046)	

Source: PREALC, special tabulations of data from country surveys.

* Household heads
** Including those with no education
*** Employed with a regular (permanent) salary.

Table 4.- Asunción: Average income of employed population by educational levels and sectors
(guaraníes per week)

Educational levels	Private sector		Government	Total
	Artisanal (informal)	Modern (capitalist)		
Up to 3 years	980	2.409	1.907	1.220
4 to 6 years	1.396	2.713	n.s.	1.938
7 to 12 years	2.389	4.066	2.908	2.724
13 years and more	4.798	9.797	n.s.	6.642
Total	1.745	4.536	4.416	2.622
Average years of schooling	5.94	8.11	9.79	
Percentage employed in the sector	57%	26%	17%	100%

n.s.: figures are not significatives

Source: PREALC, Situación y perspectivas del empleo en Paraguay, ILO Santiago, 1975, tables 50 y 51.

Paulo R. Souza y Víctor E. Tokman, "Características y funcionamiento del sector informal: el caso de Paraguay", in Revista Paraguaya de Sociología, año 11, No. 31, 1974, p. 56.

Table 5.- Income levels of employed people with permanent salaries by size of firm and educational level (in years and $ R.D.)

Cities / Education	Males								Females			
	Total males				Homeholds heads 25 to 54 years of age							
	small	median	large	total	small	median	large	total	small	median	large	total
Santo Domingo												
Up to 3 grades	27	29	32	31	31	35	31	32	11	20	21	14
4 to 6 grades	22	31	32	29	26	33	34	33	14	23	19	18
7 to 9 grades	28	37	39	37	29	44	40	41	24	23	28	26
10 to 12 grades	25	38	44	39	31	45	52	48	18	22	24	21
13 and more	52	46	64	58	72	61	76	72	18	28	24	24
Income by average year of schooling	3.9	5.2	5.3	-	5.3	6.4	6.4	-	2.4	3.4	3.0	-
Santiago de los Caballeros												
Up to 3 grades	23	28	32	28	23	25	33	29	14	-	20	14
4 to 6 grades	34	31	39	33	34	34	33	32	22	24	21	22
7 to 9 grades	25	53	41	41	27	62	46	52	19	25	20	22
10 to 12 grades	40	61	82	56	47	72	84	63	28	51	47	42
13 and more	72	118	168	112	80	114	224	122	50	68	74	64
Income by average year of schooling	4.6	6.5	8.7	-	5.1	7.4	10.5	-	3.0	4.5	5.0	-

Note: in Santiago de los Caballeros lower socioeconomic strata are not included

Table 6.- Schooling levels by length of unemployment

City	Occupational status	Males		Females	
		Up to 12 weeks	More than 12 weeks	Up to 12 weeks	More than 12 weeks
Managua	Unemployed with experience	4.4 (59)	3.7 (50)	2.9 (39)	4.5 (35)
	Looking for their 1st job	6.5 (17)	6.2 (20)	4.7 (30)	5.1 (21)
Santo Domingo	Unemployed with experience	5.3 (100)	5.2 (167)	5.5 (65)	6.5 (85)
	Looking for their 1st job	6.3 (38)	8.1 (84)	6.0 (64)	7.5 (137)
Stgo. de los Caballeros	Unemployed with experience	5.5 (23)	5.5 (17)	4.5 (15)	7.5 (13)
	Looking for their 1st job	6.5 (2)	8.3 (9)	6.6 (14)	8.5 (12)
Asunción	Unemployed with experience	5.8 (53)	7.3 (52)	5.6 (48)	7.2 (29)
	Looking for their 1st job	7.0 (26)	7.7 (48)	7.4 (24)	9.0 (25)
San Salvador	Unemployed with experience	6.3 (79)	6.4 (27)	7.9 (61)	8.1 (24)
	Looking for their 1st job	7.2 (27)	8.2 (6)	7.1 (26)	9.6 (14)
Stgo. de Chile	Unemployed with experience	5.3 (52)	6.4 (31)	4.9 (14)	7.3 (8)
	Looking for thier 1st job	8.1 (16)	9.9 (19)	7.7 (13)	9.2 (19)

Note: Frecuencies are presented in parenthesis.

TABLE N°7. ACTUAL AND EXPECTED INCOME LEVELS, BY SEX, UNEMPLOYMENT, STATUS AND LENGH OF THE SEARCH IN THE SIX LATIN AMERICA CITIES

CITY / UNEMPLOYMENT STATUS	MALES				FEMALES			
	Up to 12 weeks of unemployment		More than 12 weeks of unemployment		Up to 12 weeks of unemployment		More than 12 weeks of unemployment	
	Actual Income level	Expected Income	Actual Income level	Expected Income	Actual Income level	Expected Income	Actual Income level	Expected Income
Managua:								
Unemployed with experience and income	658 (25)	179 (24)	531 (23)	197 (24)	421 (10)	118 (9)	620 (10)	246 (10)
Unemployed with experience no income	-	209 (32)	-	198 (24)	-	129 (28)	-	159 (23)
Looking for a first job	600 (1)	197 (14)	300 (1)	190 (16)	250 (2)	164 (24)	350 (3)	187 (18)
Santo Domingo:								
Unemployed with experience and income	29 (25)	32 (25)	17 (55)	35 (55)	20 (10)	16 (10)	7 (13)	24 (13)
Unemployed with experience no income	-	36 (70)	-	37 (99)	-	21 (61)	-	25 (55)
Looking for a first job	9 (11)	26 (35)	9 (10)	30 (68)	7 (2)	40 (60)	2 (6)	25 (122)
Santiago de los Caballeros:								
Unemployed with experience and income	14 (9)	33 (4)	18 (7)	23 (7)	6 (1)	20 (1)	-	-
Unemployed with experience no income	-	37 (14)	-	31 (10)	-	24 (14)	-	23 (14)
Looking for a first job	-	23 (2)	15 (1)	32 (9)	4 (1)	22 (7)	-	33 (7)
San Salvador:								
Unemployed with experience and income	5 (2)	46 (78)	-	48 (26)	6 (3)	31 (61)	7 (2)	41 (24)
Unemployed with experience no income	-	-	-	-	-	-	-	-
Looking for a first job	-	47 (27)	-	40 (96)	7 (1)	33 (26)	-	39 (14)
Asunción:								
Unemployed with experience and income	934 (17)	1447 (15)	1.060 (10)	2.070 (10)	1450 (8)	1.000 (8)	865 (4)	1.476 (4)
Unemployed with experience no income	-	1862 (40)	-	1.864 (25)	-	1.108 (40)	-	1.504 (21)
Looking for a first job	1.608 (6)	1144 (31)	1.980 (5)	1.362 (43)	1008 (6)	1.177 (26)	1500 (5)	1.535 (23)
Santiago de Chile:								
Unemployed with experience and income	631 (52)	-	442 (33)	-	392 (14)	-	391 (9)	-

Table 8 - Income required to engage in a new job by age and educational levels in five cities
(in currency of each country)

City / Schooling	24 years or less			25 to 54 years		55 years and more	
	Employed	Unemployed		Employed	Unemployed (Experienced)	Employed	Unemployed (Experienced)
	Variable salary	Experienced	looking for 1st job			Variable Salary	
Managua							
No	—	—	n.s.	—	153	—	150
1 to 3 years	—	133	147	—	168	—	n.s.
4 to 6 years	—	179	178	—	200	—	n.s.
7 to 12 years	—	247	203	—	n.s.	—	n.s.
Santo Domingo							
No	n.s.	n.s.	n.s.	33	25	15	28
1 to 3 years	29	25	19	34	26	25	27
4 to 6 years	28	22	21	41	33	n.s.	30
7 to 12 years	37	37	30	38	42	n.s.	41
Stgo. de Los Caballeros							
No	n.s.	n.s.	—	22	22	n.s.	—
1 to 3 years	n.s.	n.s.	—	55	29	n.s.	n.s.
4 to 6 years	23	24	23	41	n.s.	n.s.	n.s.
7 to 12 years	31	27	27	55	31	n.s.	n.s.
San Salvador							
No	n.s.	n.s.	n.s.	41	39	39	n.s.
1 to 3 years	32	n.s.	n.s.	49	42	—	n.s.
4 to 6 years	—	31	27	51	45	47	n.s.
7 to 12 years	48	40	40	93	44	166	n.s.
Asunción							
No	—	—	—	n.s.	n.s.	n.s.	n.s.
1 to 3 years	1393	983	n.s.	1794	1190	1628	1814
4 to 6 years	1291	1221	1139	2041	1705	1814	n.s.
7 to 12 years	1851	1588	1341	2722	6481	5020	n.s.

Source: PREALC tabulations of data from country surveys.